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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/588,419	06/06/2000	Joseph C. Olson	V0077/7124WRM	9440

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Gary L Loser Esq
Vice President and General Counsel
Varian Semiconductor Equipment Associates Inc
35 Dory Road
Gloucester, MA 01930

EXAMINER

VANORE, DAVID A

ART UNIT PAPER NUMBER

2881

DATE MAILED: 03/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/588,419

Applicant(s)

OLSON ET AL.

Examiner

David A Vanore

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 23 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 23 recites a detector comprising at least three detectors where the direction or parallelism of a beam are measured in three dimensions. The specification, while discussing the use of two detectors and making measurements in an x and y direction, make no mention of measuring anything in a third dimension.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-22, and 24 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Berrian et al. Berrian et al. teaches an ion implantation and beam controlling device comprising an ion beam source (Fig. 9 Item 92, 96), a dose control means for varying the intensity and dose of an ion beam (Fig. 6 Item 118), a beam modifier and detection means for determining the intensity and direction of a beam in the form of a Faraday detector (See Fig. 4 and Fig. 9 Item 106 and 124), a beam uniformity display means operatively connected to the uniformity control means for maintaining beam uniformity (Fig. 9 Item 124), a drive means (Fig. 9 Item 108) controlling the position of said Faraday detector in any of a plurality of parallel beam paths (Fig. 4 and Fig. 6, note motion of Faraday detector along axis perpendicular to beam path and intersection of detector path with beam), and a control means in the form of a computer (Fig. 9 Item 120).

Regarding claim 24, Berrian teaches a detector which gathers intensity profiles at a plurality of positions (Fig. 4 Item 82) to determine a beam direction or parallelism (Col. 8 Lines 8-50).

Response to Arguments

Applicant's arguments filed January 7, 2002 have been fully considered but they are not persuasive.

Applicant argues that Berrian fails to teach forming an adjusted intensity profile of a beam and determining the direction or parallelism of the beam. Examiner disagrees.

Berrian teaches a detector having a slit which scans across a beam scan region while measuring the beam current. The detector supplies information regarding the beam dose and the location of the detected dose to a deflection control to shape and control the beam (Col. 13 Lines 57-Col. 14 Line 64)

Applicant also argues that Berrian fails to teach a beam blocking means, a beam modifying means and a controller for determining a direction or parallelism of a beam based on detecting an intensity profile of a beam. As mentioned before, Berrian does teach a control means determining the direction of a beam using a detector having a slit which maps the beam intensity at a plurality of positions. Furthermore, Berrian does teach a beam modifying means (Fig. 1A) and a beam blocking means (Fig. 2).

Further, Applicant argues that Berrian fails to teach a device for determining the direction or parallelism of a beam. However, Berrian teaches a beam collimating means (Fig. 2) arranged upstream of a detector means having a narrow slit (Fig. 4). The direction or parallelism of beam can be determined using a collimated beam and a narrow slit having a detection means where the detector determines the intensity such as in the art of Berrian.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A Vanore whose telephone number is 703-306-0246. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Lee can be reached on 703-308-4116. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-9797.

dav
March 11, 2002


JOHN R. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800